

# The Gut-Brain Connection and Autism

— by Dr. Milton Bastidas, Medical Director of True Lifelong Wellness Center —

The American Academy of Pediatrics in their Nov. 2012 issue (*Pediatrics*) has recognized a connection between gastro-intestinal problems and Autism Spectrum Disorder (ASD). Their article suggests there is a “lack of recognition by clinicians that certain behavioral manifestations in children with ASDs are indicators of GI problems (eg, pain, discomfort, or nausea).” The article also suggests that there is growing evidence that points to a significant relationship between the health (or unhealthy) balance of gut bacteria, intestinal permeability, and the resulting immune response that can interfere with specific metabolic pathways. You may have heard about this “phenomenon” as the gut-brain connection. Let me assure you, this connection is very real and can have a significant impact on children with ASD.

It is well known that the brain is the control center for all our organs and tissues, but there is also a gut-brain axis which is just as important. A large number of chronic conditions we see today have an underlying root cause which begins in the digestive system. Additionally, many genetically predisposed conditions are affected positively or negatively by our gut health. Recently, studies have made clear that communal and probiotic gut microbes can have an influence on brain function and behavior. In other words, a healthy gut leads to a healthy brain.

One of the major roles of the GI tract is its ability to keep bad bacteria and pathogens out and to regulate the movement of proteins and nutrients from the gut to the blood for delivery to our cells. This barrier is composed of Enterocytes that are lined up and tightly joined together by

junction proteins. These junction proteins are stimulated to open and close, resulting in the entry of small molecules such as amino acids, vitamins, minerals, and water into the circulation so that we may be nourished.

Unfortunately, there are instances when this complex function of the barrier has been breached, leaving us vulnerable to entry of large undigested proteins and pathogens into the circulation. These can create an immune challenge and when left unresolved, this can lead to inflammation. Small-intestinal exposure to bad bacteria and Gluten are two of the more powerful triggers to tight junction disassembly.

While more research is needed in order to answer many questions in ASD, there is a growing body of evidence that digestive health affects behavioral disorders. At True Lifelong Wellness Center, we promote the use of digestive enzymes and probiotics in order to help the gut carry out its major functions of digestion and absorption.

True Lifelong Wellness Center utilizes Transformation Enzyme Corporation products formulated specifically for the digestive needs of children.\* **Kidz Digest™** supports digestion to assist in maintaining intestinal health, supports the immune system, and reduces the symptoms of occasional indigestion, gas, and bloating.\* Transformation probiotics support relief from occasional GI discomfort, reduces problems associated with food sensitivities, and encourages healthy and timely elimination by acting as a natural stool softener.\*



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## Testimonials

"I have a three-year-old grandson who was diagnosed with full spectrum autism. We had him on Transformation Foundation Products (a digestive enzyme, a probiotic, and a protease). He now has regular bowel movements for the first time since he was one year old, plus a greatly increased attention span. He now spends about 90% of his time with another person (whoever is around) instead of going to be alone. His teachers report that he can now sit for 15 minutes giving his full attention, whereas before it was only seconds. I am so grateful for your products and so excited to tell my grandson's story!"

-Susan T., Nutritionist

"As a researcher and mother of a recovered autistic son, I've had plenty of experience testing and implementing diets and supplements. In addition, my experience as a professional certified health coach has led me to realize that, although dietary restrictions are necessary, complete compliance is hard to find. Adding digestive enzymes to digest as many proteins and peptides as possible is also needed."

- Kristi C., Cert. Health Coach

"I have been seeing a four-year-old boy with autism for the last five months. He had been seeing a holistic practitioner who advised a casein and gluten-free diet as well as a digestive formula, magnesium, and basic multi-vitamins. His mother noticed he was doing fine except that there was no 'breakthrough' she felt. I had a feeling the digestive enzymes he was given were not comprehensive enough for his condition and the multi-vitamins could be creating more toxic load due to poor absorption. His mother has done lots of reading on how to care for a child with autism and was interested in alternative treatments. She was open to start him on a protease and probiotic. After the second month, as his blood improved, she also accepted a digestive enzyme. The boy has improved very much after taking enzymes as per my observations and darkfield analysis. According to his mother, he is a lot happier and more cheerful now. I also notice he communicates better with me. He offers me a hug readily when I ask and it only takes a little cajoling to do his finger stick, compared to five months back when four of us had to 'fight' him to get his finger. The mother is now a very satisfied client as she noticed the changes in her son. I am happy too."

-Charlene Hui, Nutritionist in Singapore



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